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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/812,512	03/30/2004	John Anderson Campbell	EMC04-04(04029)	3214
<div>22468 7590 05/29/2007</div> <div>CHAPIN & HUANG L.L.C. WESTBOROUGH OFFICE PARK 1700 WEST PARK DRIVE WESTBOROUGH, MA 01581</div>				
			<div>EXAMINER</div> <div>PANNALA, SATHYANARAYAN R</div>	
			<div>ART UNIT</div> <div>2164</div>	<div>PAPER NUMBER</div>
			<div>MAIL DATE</div> <div>05/29/2007</div>	<div>DELIVERY MODE</div> <div>PAPER</div>

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/812,512

Applicant(s)

CAMPBELL, JOHN ANDERSON

Examiner

Sathyanarayan Pannala

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 March 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6, 13-21 and 28-37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 13-21 and 28-37 is/are rejected.
- 7) ☒ Claim(s) 7-12 and 22-27 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

DETAILED ACTION

1. Applicant's Amendment filed on 3/12/2007 has been entered with amended claims 4-5, 19-20. In this Office Action, claims 1-37 are pending.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, claims 1-37 should show all the steps involved in drawings, with must be shown or the feature(s) canceled from the claim(s). The drawings on record of Fig. 2-5 are merely listing claims in blocks or vice versa. No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an

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application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 31 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicant is claiming as "summary record **from the data collection agent**" whereas applicant amended the limitation as "configured to receive input **from the multiple data collection agents**." Applicant did not specify from which agent the summary report is expected.

5. Claims 32-37 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicant is claiming "the summary of the storage information." Whereas, the Specification cited by the applicant in support of the claim deals within the file system summary of life span.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 1-6, 16-21 and 31-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zahavi et al. (US Patent 6,886,020) hereinafter Zahavi, and in view of Therrien et al. (USPA Pub. 2004/0093361A1) hereinafter Therrien.

8. As per independent claims 1, 16 and 31, Zahavi teaches a data management and archive method and apparatus, such as for implementation in an automated system to monitor and manage status, performance and configuration data for a plurality of networked storage components (col. 4, lines 63-67). Zahavi teaches the claimed, receiving a data collection policy to identify storage information to be collected

concerning a set of storage entities in the storage area network environment (Fig. 3, col. 5, lines 61-65). Zahavi teaches the claimed, collecting storage information concerning the set of storage entities according to the data collection policy (Fig. 3, col. 5, line 66 to col. 6, line 2).

Zahavi does not explicitly teach producing a summary report on storage. However, Therrien teaches the claimed, processing the collected storage information to produce at least one summary record of the storage information for the set of storage entities, the at least one summary record containing a summary of the collected storage information for the set of storage entities calculated according to the data collection policy and transferring the at least one summary record from the data collection agent to a storage management application for presentation to a user of the storage management application (Fig. 8, page 6, paragraph [0067]). Thus, it would have been obvious to one of ordinary skill in the data processing art at the time of the invention, to combine the teachings of the cited references because Therrien's teachings would have allowed Zahavi's method of storage resources sharing by many applications in a secured manner would increase overall utilization to 80-90% (page 1, paragraph [0006]).

Zahavi also teaches other limitations of claim 16 are as: a network interface and a storage interface (Fig.2, col. 4, lines 61-65), a processor and a memory system (Fig.2, col. 5, lines 1-5). Interconnection mechanism (Fig.2).

Zahavi also teaches other limitations of claim 31 are as: collection policy for use by a data collection agent, which is one of multiple data collection agents operating in a

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storage area network environment (Fig. 3, col.5, line 65 to col. 6, line 1), configured to receive input from the multiple data collection agents Fig. 3, col. 5, line 66 to col. 6, line 2).

9. As per dependent claims 2, 17, Zahavi teaches the claimed, receiving a data collection policy comprises: receiving a collection level identifying a set of files corresponding to the set of storage entities from which storage information is to be collected and receiving a collection period value indicating how often to perform collection of the storage information concerning the set of storage entities (Fig. 3, col. 6, lines (29-34).

10. As per dependent claims 3, 18, Zahavi teaches the claimed, receiving a collection level corresponding to the set of storage entities from which storage information is to be collected comprises: receiving at least one of a host collection level, a file system collection level and a file set collection level and based on the collection level, identifying, as the set of storage entities, a set of file systems containing at least one file from which storage information is to be collected (Fig. 7, col. 7, lines 28-32).

11. As per dependent claims 4, 19, Zahavi teaches the claimed, receiving a collection level comprises: receiving a selection of a host collection level identifying at least one host computer system that maintains access to a set of file systems from which storage information is to be collected and identifying, as the set of storage entities

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from which storage information is to be collected, files within a set of file systems accessible within data storage systems associated with the at least one host computer system identified by the host collection level (Fig. 3, col. 5, line 66 to col. 6, line 2).

12. As per dependent claims 5, 20, Zahavi teaches the claimed, receiving a collection level comprises: receiving a selection of a file system collection level identifying at least one file system that maintains access to the set of files from which storage information is to be collected and identifying, as the set of storage entities from which storage information is to be collected, files within the identified at least one file system corresponding to the file system collection level (Fig. 5, col. 6, lines 47-49).

13. As per dependent claims 6, 21, Zahavi teaches the claimed, receiving a collection level comprises: receiving a selection of a file set collection level identifying at least one specific file from which storage information is to be collected, the selected at least one specific file indicating the set of storage entities from which storage information is to be collected (Fig. 3, col. 5, lines 34-35).

14. As per dependent claim 32, receiving the data collection policy includes receiving the data collection policy for use by the data collection agent to identify the storage information to be collected and wherein processing the collected storage information to produce the summary record of the storage information includes performing at least one calculation on the collected storage information at the data collection agent, the at least

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one calculation performed according to the data collection policy received by the data collection agent (Fig. 12, col. 11, line 11-21).

15. As per dependent claims 33, processing the collected storage information includes incorporating a result of the at least one calculation on the collected storage information into the summary record prior to transferring the summary record from the data collection agent to the storage management application (Fig. 12, col. 11, line 11-21).

16. As per dependent claims 34, receiving the data collection policy from the storage management application, based on receipt of the data collection policy from the storage management application, configuring the data collection agent as one of multiple software agents, each of which, collects data from resources in the storage area network, produces a summary report, and forwards the summary report to the storage management application (Fig. 12, col. 11, line 11-21).

17. As per dependent claim 35, wherein processing the collected storage information includes substantially reducing an amount of the data collected by the data collection agent into corresponding statistical information for inclusion in the summary record (Fig. 11, col. 10, line 55-67).

18. As per dependent claims 36, wherein processing the collected storage information to produce the at least one summary record includes: prior to transferring the at least one summary record from the agent to the storage management application, applying arithmetic operations as specified by the data collection policy to the collected storage information produce the corresponding statistical information for inclusion in the summary record (Fig. 12, col. 11, line 11-21).

19. As per dependent claims 37, wherein receiving the data collection policy includes: receiving file filter criteria identifying types of files associated with set of storage entities from which storage information is to be collected; Utilizing the filter criteria to collect the storage information and wherein processing the collected storage information includes applying averaging functions to the storage information to produce the at least one summary record (Fig. 12, col. 11, line 11-21).

20. Claims 13-15, 28-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zahavi et al. (US Patent 6,886,020) hereinafter Zahavi, in view of Therrien et al. (USPA Pub. 2004/0093361 A1) hereinafter Therrien, and in view of Gusher et al. (US Patent 6,938,057) hereinafter Gusher.

21. As per dependent claims 13, 28, Zahavi and Therrien combined teach claims 1 and 16. Zahavi and Therrien do not teach getting files sizes and ages. However, Gusher teaches the claimed, the data collection policy received defines a host collection

level and wherein collecting storage information concerning the set of storage entities according to the data collection policy comprises: for each host defined by the host collection level, collecting storage information related to the sizes and ages of files and directories within file systems accessible to that host and wherein processing the collected storage information to produce at least one summary record of the storage information for the set of storage entities comprises: for each host defined by the host collection level, producing a size summary record and an age summary record by applying averaging functions to the storage information related to the sizes and ages of files and directories within file systems accessible to that host (Fig. 3-4, 7, col. 1, lines 32-35; col. 6, lines 6-9; col. 5, lines 48-49 and col. 8, lines 10-16). Thus, it would have been obvious to one of ordinary skill in the data processing art at the time of the invention, to have combined the teachings of the cited references because Gusher's teachings would have allowed Zahavi's method to provide an effective system for backing up computers in a network (col. 1, lines 61-63).

22. As per dependent claims 14, 29, Zahavi and Therrien combined teach claims 1 and 16. Zahavi and Therrien do not teach getting files sizes and ages. However, Gusher teaches the claimed, the data collection policy received defines a file system collection level and wherein collecting storage information concerning the set of storage entities according to the data collection policy comprises: for each file system defined by the file system collection level, collecting storage information related to the sizes and ages of files and directories within that file system and wherein processing the collected

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storage information to produce at least one summary record of the storage information for the set of storage entities comprises: for each file system defined by the file system collection level, producing a size summary record and an age summary record by applying averaging functions to the storage information related to the sizes and ages of files and directories within that file system (Fig. 3-4, 7, col. 1, lines 32-35; col. 6, lines 6-9; col. 5, lines 48-49 and col. 8, lines 10-16). Thus, it would have been obvious to one of ordinary skill in the data processing art at the time of the invention, to have combined the teachings of the cited references because Gusher's teachings would have allowed Zahavi's method to provide an effective system for backing up computers in a network (col. 1, lines 61-63).

23. As per dependent claims 15, 30, Zahavi and Therrien combined teach claims 1 and 16. Zahavi and Therrien do not teach getting files sizes and ages. However, Gusher teaches the claimed, the data collection policy received defines a file set collection level indicating a specific set of files for which storage information is to be collection and wherein collecting storage information concerning the set of storage entities according to the data collection policy comprises for each file defined by the file set collection level, collecting storage information related to the size and age of that file and wherein processing the collected storage information to produce at least one summary record of the storage information for the set of storage entities comprises: for all files defined by the file set collection level, producing a size summary record and an age summary record by applying averaging functions to the storage information related

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to the sizes and ages of the files identified by the file set collection level (Fig. 3-4, 7, col. 1, lines 32-35; col. 6, lines 6-9; col. 5, lines 48-49 and col. 8, lines 10-16). Thus, it would have been obvious to one of ordinary skill in the data processing art at the time of the invention, to have combined the teachings of the cited references because Gusher's teachings would have allowed Zahavi's method to provide an effective system for backing up computers in a network (col. 1, lines 61-63).

Allowable Subject Matter

24. Claims 7-12 and 22-27 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

25. Applicant's arguments filed on 3/12/2007 have been fully considered but they are not persuasive and details as follows:

- a) Applicant's argument stated as "Applicant respectfully submits that claim 1 includes limitations not taught or suggested by Zahavi."

In response to Applicant's argument, Examiner respectfully disagrees, because Zahavi do teach collection agent 30 configured on at least one host connected to the storage components e.g., the Symmetrix. (Fig. 3, col. 5, line 67

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to col. 6, line 1). Applicant is expecting same wording used in the claims to map with the prior art instead of extracting the concept. As Applicant agreed on page 20, paragraph last as "In Zahavi, the policy is used by the collection manager that initiates commands to receive data to receive raw data from one or more agents." It clearly indicated that Zahavi teaches collection agent(s). Zahavi also teaches as "multiple users requests or analyst collections can be simultaneously requested, which are handled independently from the periodic, automatically run daily collections (Fig. 4, col. 6, lines 21-25).

Further, in response to applicant's argument, a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim.

Conclusion

26. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sathyanarayan Pannala whose telephone number is (571) 272-4115. The examiner can normally be reached on 8:00 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Rones can be reached on (571) 272-4085. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Sathyanarayan Pannala
Primary Examiner

srp
May 23, 2007